

WHAT IS CLAIMED IS:

1. A method of storing a plurality of audio/video (A/V) programs on a storage medium for presentation to a viewer, comprising:

receiving a transport stream structured in packets and representing a plurality of A/V programs, each A/V program represented by a plurality of packets and identified by program identification data in each packet;

detecting the program identification data of each received packet;

storing data of packets relating to a single A/V program in a buffer portion separate from buffer portions for data of packets having program identification data related to different A/V programs; and

transferring the data of the packets from the separate buffer portions to separate storage files in a storage medium, each storage file storing only data of the packets having program identification data related to a single A/V program.

2. The method of Claim 1, wherein the A/V program includes at least one of a video program, an audio program and data content.

3. The method of Claim 1, wherein the transferring includes storing the data of the packets in separate storage files of a hard disk drive.

4. The method of Claim 3, further comprising selectively overwriting or deleting one or more storage files.

5. The method of Claim 4, further comprising reading from a storage file while playing back a recorded A/V program.

6. The method of Claim 1, wherein a packet of a transport stream includes a program association table and a program map table that describe the A/V program of the transport stream.

7. The method of Claim 6, further comprising reading from a file while playing back a recorded A/V program, wherein the reading occurs in accordance with the program identification data, program association table and program map table.

8. The method of Claim 6, wherein the packet further includes a conditional access table that enables a user to subscribe to a conditional access service.

5           9. The method of Claim 1, wherein receiving the data stream includes receiving the transport stream over an interface in accordance with the IEEE-1394 specification.

10. An audio/video (A/V) system for storing A/V programs, comprising:

10           an interface configured to receive a transport stream structured in packets and representing a plurality of A/V programs, each A/V program represented by a plurality of packets and identified by program identification data in each packet;

15           a storage management system connected to receive the transport stream from the interface and to detect the program identification data of each received packet;

20           a buffer coupled to the storage management system and having a plurality of separate buffer portions, each buffer portion being in communication with the storage management system to receive data of packets having program identification data related to a single A/V program and to store the data of the packets separate from data of packets having program identification data related to different A/V programs; and

25           a storage medium coupled to the storage management system and having a plurality of separate storage files for the A/V programs, each storage file receiving data of the packets having program identification data related to a single A/V program and transferred from one of the separate buffer portions of the buffer.

30           11. The system of Claim 10, wherein the A/V program includes at least one of a video program, an audio program and data content.

          12. The system of Claim 10, wherein the interface is configured to operate in accordance with the IEEE-1394 specification.

13. The system of Claim 10, wherein the storage medium is a hard disk drive.

5 14. The system of Claim 13, wherein the storage management system controls the hard disk drive to selectively overwrite or delete one or more storage files.

10 15. The system of Claim 10, wherein the storage management system includes a plurality of filters, each filter assigned to a buffer channel and configured to detect data comprised in packets having program identification data related to a single A/V program, each buffer channel connecting the filter to one of the buffer portions.